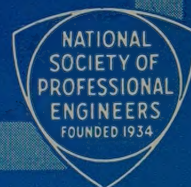


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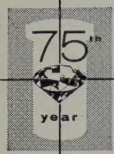


Agricultural and Industrial Development have progressed together during 75 years of Engineering Progress in Illinois. See pages 1 and 2.

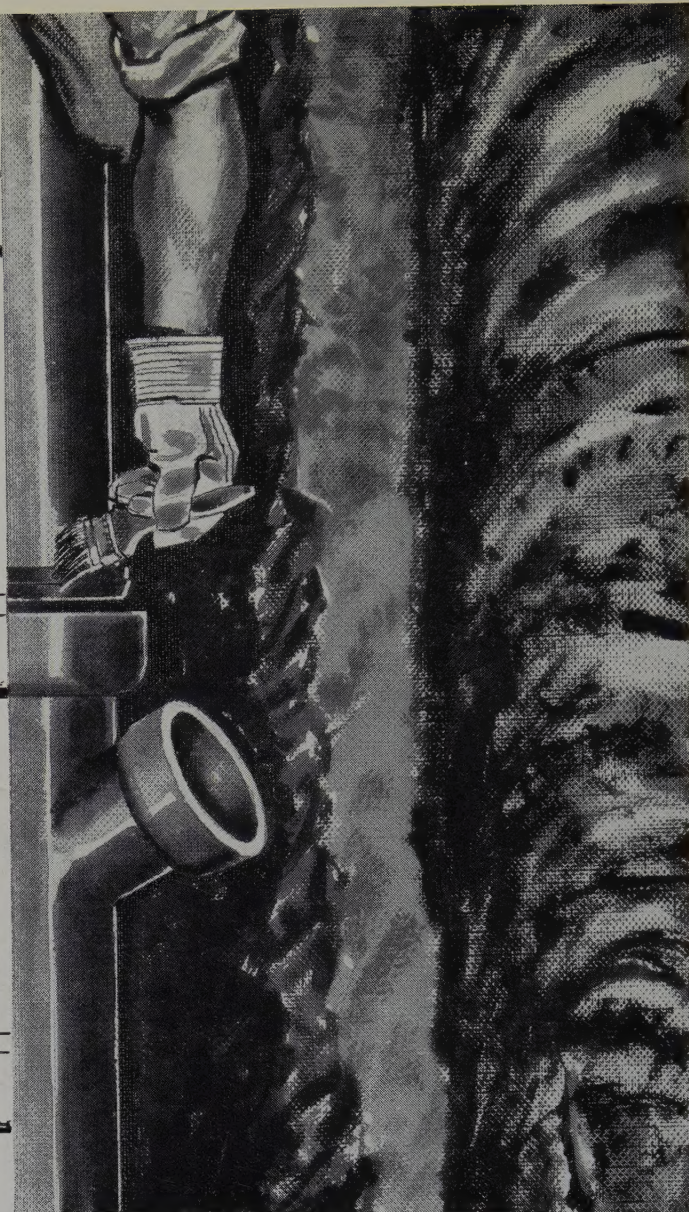
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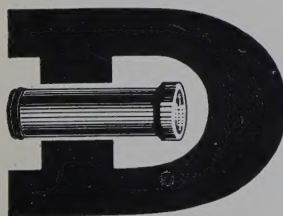
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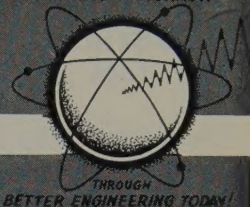


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INDUSTRIAL DEVELOPMENT IN ILLINOIS

By M. GARCIA

The Engineer, His Participation, Past, Present and Future

We, who live here in Illinois, sometimes forget its location and its relation to the overall industrial development of our great nation, whose industrial might is being challenged by countries of Western Europe and, of course, by Russia.

Illinois, commonly known as the Prairie State, is also referred to as an "Industrial Colossus" which in itself is a tribute to the efforts and labors of the people of the State. What part did the Engineer play in developing the Industrial Colossus?



M. Garcia

First, permit me to take a few liberties in describing this State of ours—Illinois—in a manner that would permit me to place emphasis on the Engineer in answering the question. If we could not see beyond its rivers, Illinois would appear to be a peninsula—a mass of land surrounded by water on at least three sides. However, the Engineers of yesteryear and some of today have spanned the Mighty Mississippi, as well as the Ohio, Illinois, and Wabash Rivers with structures of steel and concrete, making our State contiguous with others and providing for the free flow of men, equipment, materials, and food.

These structures stand as monuments to the achievements of the Engineers.

Where rolling prairies, flat lands and forests formerly dominated the landscape, cities now exist. Cities, including Chicago—the second largest in the nation—which are great centers of manufacturing, commerce and education, each surrounded by suburbia and rich farm lands. These cities are all connected by highways of concrete for vehicular traffic; ribbons of steel rail for the railroads; nature's, as well as man-developed water routes for mass-

(Continued on Page 2)

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INDUSTRIAL DEVELOPMENT IN ILLINOIS—

(Continued from Page 1)

transportation by barge and air-lanes and airports for travel by airplane.

These important means of transportation, plus the rapid means of communication, wireless, radio, telephone and television, etc., could not be what they are today were it not for the tireless efforts and determination of the Engineer.

This is all to the credit of yesterday's accomplishments, but one cannot gain new heights tomorrow on yesterday's laurels! What are our goals for today and tomorrow?

This year is the beginning of a new decade—an era of opportunity—a challenge to the men in industry in the rapidly changing technological fields of nuclear energy, automation, missile and space capsule developments, solid fuels, plastics and others, all too numerous to mention. All of these fields, although not new to many Engineers and Scientists, are relatively new in development and some are merely in the experiment stages, however, before the end of the decade, most of us will be quite familiar with these projects.

The Engineer in meeting the challenges of the decade and in order to contribute to and strengthen the reputation of our "Industrial Colossus" must, or should, (1) continue his education, become informed in technological advances, particularly those pertaining to his field of endeavor, (2) assist the young engineer in your employ as well as encourage him to be registered, (3) keep his identity as a Professional Engineer, participate in Professional and Technical Societies in an exchange of ideas, benefitting from one another's viewpoints, (4) dedicate one's professional knowledge and skill to the advancement and betterment of human welfare as outlined in the Engineers' Creed, (5) participate in community affairs, assuming and sharing responsibility and lending your talents for the good of the community. These are the basic requirements as I see them and I offer them as a plan and possible solution for the challenge of the decade.

The Diamond Jubilee Exposition of the Illinois Society of Professional Engineers will no doubt include many exhibits depicting the strides and achievements of Engineers in Industry. This exposition, although it marks the 75th year of Engineering progress in Illinois, will also contain an insight to tomorrow's technological advances.



Mrs. Charles (Betty) Ritchie, Chairman of Ladies' Activities Committee for the 75th Convention. The Capital Chapter women have a fine program planned including a tea at the Governor's Mansion.

COMMENTS FROM OUR MEMBERS

The 1960 N.S.P.E. ballot lists only one candidate, plus a write-in line, for each office. Is it possible that the nominating committee is unable to find more than one person in the entire country qualified for each position? Or did the nominating committee simply quit when their job was half done? Why should there not be at least two candidates for each office? Except in unusual cases a write-in candidate hasn't the chance of a snowflake in the Congo.

The N.S.P.E. is not unique in their use of the "Ja" type ballot. Trade unions, the ASCE, and the state and local branches of the Society of Professional Engineers habitually use the one-name ballot.

The one-name ballot is undemocratic, it discourages many who are willing to serve their society, and it does not encourage a lively interest in our professional groups.

I suggest an amendment to the constitutions of our national, state and local groups requiring a minimum of two candidates per office.

Harold M. Maxwell, P.E.
765 Bryn Mawr Ave.
Roselle, Illinois

THIRD LAND SURVEYORS' CONFERENCE HELD

The Third Annual Illinois Land Surveyors Conference was held February 15 and 16 in Urbana. The conference is conducted by the Illinois Society of Professional Engineers, the Illinois Registered Land Surveyors Association, the Society of Professional Land Surveyors, and the Department of Civil Engineering, in cooperation with the Division of University Extension, University of Illinois.

In addition to workshop topics, such as Computations, Photogrammetry, State Plane Coordinates, panel discussions were held on the following subjects: Review of Plat Legislation, Original Government Plats and Notes, Opportunities for Creative Thinking in Business, Liability Insurance for Surveyors, Who is a Land Planner, and Use of Electronic Computers in Surveying Calculation, and Standards for Property Surveys to Meet Today's Requirements.

Conference Committee members include: Edgar E. Webster, III, General Chairman; Dwain Wallace, Vice Chairman; George Chlebiecki, Robert Silander, Robert Nowicki, Wilbur Francis, Charles S. Danner, Donovan D. Anderson, Roy Kastner, Rowland Fabian, Folkley Peterson, Eugene Whitler, Ben A. Fenger, Frank Kaplan, Arnold Lundgren, Emmett Kennedy, Willard G. Flagg, Gordon Gracie, W. J. Reese, Henry Squires, Robert K. Newton (Supervisor of Engineering Extension), and Winfield H. Eldridge (University Coordinator).

ISPE Executive Director L. C. Goddard participated in the conference.

AMERICAN POWER CONFERENCE SET FOR MARCH 29-31

A forum devoted to unconventional methods of generating power will be one of the features of the 22nd annual American Power Conference to be held March 29 through 31 at the Sherman Hotel, Chicago.

Research experts will discuss the fuel cell, the nuclear rocket program, isotopic heat and power, and magnetohydrodynamics.

The three-day meeting will include about 95 papers and addresses covering all aspects of the power industry.

Conference director R. A. Budenholzer of Illinois Institute of Technology has announced that the All-Engineers dinner will be held on Wednesday, March 30.

More than 3,000 industrial and electric utility executives, engineers, educators and government officials are expected to attend the conference which is sponsored by Illinois Tech in cooperation with a number of technical societies and educational institutions.

I.S.P.E. NATIONAL DIRECTORS PRESENT RESOLUTION AT N.S.P.E. MEETING

Following a directive by the Board of Direction on January 9, the ISPE Resolutions Committee has submitted the following resolution to be presented at the NSPE Board Meeting in Wichita, Kansas, this month.

"WHEREAS: Contracts of the Federal Government with engineers do not require the engineer to be a Registered Professional Engineer, and

"WHEREAS: In the interest of protecting health, safety, and welfare of the people of the United States, contracts for engineering with the Federal Government should insure the services of competent engineers by specifying that Registered Professional Engineers be in charge of such engineering work.

"NOW THEREFORE BE IT RESOLVED: That the Executive Director of the National Society of Professional Engineers contact the various departments and/or bureaus of the Federal Government, which let engineering contracts, suggesting that all future engineering contracts specify the engineer to be a Registered Professional Engineer, and

"BE IT FURTHER RESOLVED: In the event the response to the Executive Director's efforts in this matter is unfavorable or that fails to produce the desired results, the Executive Director shall refer the matter to the President of the National Society of Professional Engineers that he may in turn notify the appropriate Committee of the Society or, at his discretion, appoint a special committee, to work toward achieving legislation requiring that Federal Engineering Contracts specify the engineer be a Registered Professional Engineer."



Left to right: National Director C. J. McLean visits with Donald L. Averison, Assistant General Manager of Research Division of American Machine & Foundry; at right is Dick Kessler. Suggestions from Management Conference resulted in above Resolution being presented to NSPE Board.

WHERE DO WE GO FROM HERE?

EDITOR'S NOTE: Gabrielle D'Elia, a Springfield High School Senior, presented the following thought provoking address to a Youth Day Service of the First Congregational Church. It carried such impact, it was editorialized in a local newspaper. Why should it appear in an Engineer publication? A Rabbi summarized the reason in a Brotherhood message. "Have we the spiritual vigor to control our technical creativeness?"

With every generation, in the opinion, seemingly, of many adults, the teen-agers are "going to the dogs." In like fashion, as each generation of teen-agers stands on the threshold of adulthood, the world appears to be in sad shape. Many of you in the congregation matured during World War I, many more of you during the depression, and others during World War II. Certainly the picture of world and national affairs during those times was not rosy.

As we teen-agers look around us today, we do not find a rosy picture, either. There are many grave problems that are going to fall on the shoulders of the youth of today. We are faced with the largest debt ever built up by any country. Currently, the amount is about \$290 billion dollars. This is mainly due to the past wars and has been increased by the defense budget. Out of every tax dollar, 85 percent is used for defense. There seems to be much disagreement as to the state of our defense, and it is difficult for the individual to draw conclusions amid all the political accusations from both of our political parties. The age of nuclear power and nuclear testing brings with it the increase in radioactivity which could cause deformities in babies in the future, and can cause disability or death for persons living now by damaging the body cells.

The cold war continues unabated, as we struggle to maintain our place as a great force for freedom and democracy. We are in a race with the Communists for supremacy in the missile field, in economy, and in world leadership.

We are directly having trouble with Panama and Cuba over our rights in those countries, and we could well do a little national soul-searching, especially with regard to Panama. We are indirectly involved in trouble concerning Laos, India, and Tibet because we are interested in defending them against the aggressions of Communism.

Here at home we are faced with a rising rate of crime. Our prisons and jails are rapidly filling and violence seems to be increasing by leaps and bounds. Many think the morals of the people are deteriorating just as rapidly, and as evidence show the TV fixes and other frauds in government and politics. Our own State can boast of the Hodge scandal, and now of the discouraging condition of the Chicago police department.

We can wonder if our sense of values is not all out of proportion. Our athletes and entertainers are the idols of the times, and receive commensurate financial award, while our scientists, ministers, and teachers struggle along. Reactions to the Van Doren exposure revealed many startling opinions. Just how important is honesty? This carries over into our political parties. Many of the capable people who are of the caliber to be holding office in our national government, our state, and our city will not expose themselves and their families to the mud slinging that seems inevitable. And if they can't make their concessions to their party machines, it seems they don't have much opportunity, anyhow. To get down to the teen-age level, the ease with which so many students cheat in school makes one wonder how in a few years they will go about teaching honesty to their own children.

There are many problems that relate to our standard of living. Our schools have not kept pace with the increasing population and everywhere now there is a struggle to get adequate building and to get and keep good teachers. The slums and crowded conditions of our big cities and serious problems, with crime rates increasing, while the move of the people with better incomes and education out of the cities to the outskirts continues. Unemployment, adequate medical care, even the price of many drugs, are all serious questions.

We are having race trouble now. The most recent pertains to persecution of the Jewish people here at home and in Germany. I would like to present some thoughts about this:

As West Germany's President Heinrich Lubke said, the Germans have an over-estimation of material achievement as opposed to intellectual, spiritual, and moral values. The West German Government and the Allied Governments, the United States included, have been interested in economic recovery rather than moral rehabilitation.

Hatred is the attempt of people to build themselves up. Insecure people are driven to hate. A Rabbi in Cologne, whose synagogue was desecrated, the initial outburst of Anti-Semitic incidents, related this feeling. Right now Germany is well off, but what will happen when more difficult times come? Will they again hold the Jews responsible?

A Jewish Rabbi recently interviewed on the Dave Garroway Program had this to say. Anti-Semitism is not a problem for the Jews. It is a problem for the Christians. The degree measures how much a Christian is a Christian. It may be difficult to like everyone, but we must have respect for them and their rights. Christian parents should be very aware of the need to suppress their prejudices and not to pass them on to their children by actions, derogatory statements, or attitudes.

This certainly should also apply to teachers in our public schools. How many of us have heard our present

teachers make remarks clearly showing their prejudices.

When our church burned, the Jewish people generously let us share their church building with them. Our relation with them has since been in a spirit of good brotherhood.

Then we have conflicting reports about the condition of our economy, from the rosy one that there will be a surplus in the national budget next year, to the one that the situation now is very similar to the one in 1929 that led to the big depression.

At this point, we can begin to wonder—where will we go from here? Perhaps a look backward at history could bring a little cheer. Certainly, through the centuries, mankind has been making progress. Sometimes it seems like the frog, going up the slope. He takes three hops forward and falls back two, but eventually he reaches his goal. If we take the view that man was placed here to strive to become an image of Christ, may-



Gabrielle D'Elia

be there is some hope. Certainly there must be a humane, compassionate drive—a drive of love, whether it has a Christian label or not—that has brought about many of the changes. There is the improvement in the lot of the common worker, for example, from the serf in the Dark Ages to the craftsman of today; improvements in health and sanitation that have cut down plagues and pestilences and have removed inhumane living conditions in many places; improvements in our penal system from the dungeons to the program of rehabilitation of today—which has far to go, of course, but they are trying; the change in the attitude toward and care of our mentally ill; and the change in treatment and care of our old people from centuries ago. The church, through history, has been one of the strongest forces working for good. There were times when its authority was mis-

used, but its contributions to civilization and education cannot be measured. So perhaps our hope may be that we can go down in history on the three jumps ahead, and not the two falling behind.

It would seem that at the present time there is a most fervent hope for peace among a great percentage of the people of our world, and a pessimistic fear that war is almost inevitable eventually. From past history, we know that war never really settles anything. We should be civilized enough to live together and to look for settlements to our problems instead of pushing spheres of influence and power.

Like every other country, the United States is out to get what it can, but as soon as we realize this and remedy it, the United States will be a much stronger force for peace than it is now. It seems we are not too popular in some of the other South American countries, also.

American steel and oil problems are similar to the workings of the other countries. The American steel and oil industries built factories in foreign lands and use the cheap foreign labor to work on the products. They discourage the formation of unions of the foreign workers and try to get as much from the workers for as little as possible. They then transport the foreign products to the United States and undercut the American industries.

For these reasons, and such things as the way we treat the Indians, Negroes, and minorities in general, the United States is as greatly disliked in many parts of the world as the Russians and Chinese Communists are disliked by us.

I am sure that most Americans know about Russia's misuse of Poland, Hungary, and the Ukraine, and Red China's misuse of Tibet and Laos.

So, underneath all the ideologies, most causes for wars boil down to plain economic ones. And certainly, in all this great world where communication has become so simple, where so many of the people ascribe to one of several religious faiths, all of whose tenets embody similar principles that would call for peace, and where even in the Communist countries the individual persons are so eager for peace, there should be some hope. Our civilization should be great enough that we can find some other means than war for settling our problems.

Starting a World Forum in which each country has a chance to speak might be one step. The United Nations' Educational, Social and Cultural Organization, UNESCO, is a start toward such a forum. Much more could be accomplished if it were given additional power and funds with which to work. There would have to be social, economic, and cultural development of the underprivileged nations. These nations could then improve without falling prey to a Hitler or Mussolini.

Different groups of our own country have become

(Continued on Page 10)

TAKE PRIDE IN ENGINEERING EXPOSITION PROGRESS

The Diamond Jubilee Exposition to be held in the Armory at Springfield May 4-8, 1960, was discussed at the recent Chapter Officers' Conference and enthusiasm for the plans made to date was shown.

The Society has an unusual opportunity to bring public attention to the contributions engineering is making. By tying this Exposition to the 75th Anniversary of ISPE, attention will be focused to the professional engineers. The Board of Direction voted unanimously to support this move at the January meeting. This is the Society's first "all out" effort of this kind. The impact of this public relations project on the Society's future will be tremendous.

All chapters in the Society will benefit from the public interest created by the Exposition. Its effect on you and your chapter will be determined by what you do to help make the Exposition a success. Each chapter is urged to help get good engineering exhibits—to get those key firms in your area to sign on the dotted line. The headquarters office has supplied brochures and order forms to all chapter officers and other ISPE members.

At this writing about half of the 74 spaces available have been reserved for exhibitors.

While the task of getting exhibitors continues, the next order of business will be to promote attendance. Every ISPE member should plan to visit the Exposition and bring his family and friends. Thousands of other engineers in the State who are not ISPE members should be urged to attend the Exposition. St. Clair Chapter has taken the lead in organizing attendance at the Exposition. It has designated Friday, May 6, as St. Clair Chapter Day. Special trains are being arranged for transportation to Springfield. In last month's issue of the Illinois Engineer you were told of transportation plans in cooperation with the Illinois Central Railroad.

Work is progressing satisfactorily with the Publicity Committee for the Exposition. Coverage of the event will include all media—newspaper, radio, and television.

A Special Events group is organized and is working. They will come up with some surprises to please exhibitors and visitors.

Remember, the more you do to help the Exposition, the better it will be!



Convention Committee for 75th Annual Meeting in Springfield, May 4-8. Front row, left to right: Howard Frazee, Herbert Brantley, Dean Collins, Art Kessell; back row, left to right: James Runyen, Gerald Margrave, Charles Marr, Charles Ritchie and L. D. Hudson.

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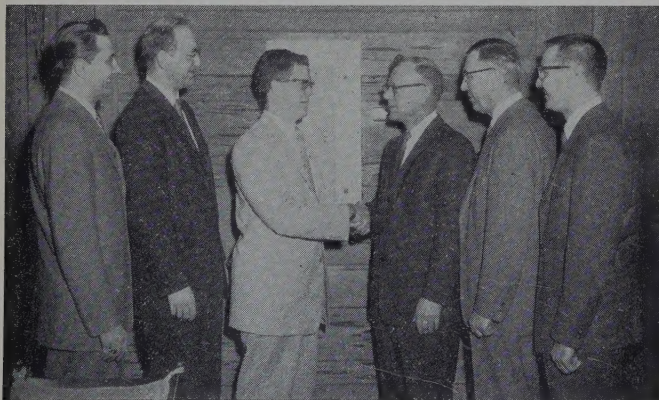
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<i>Western</i>	John W. Treuthart	Richard C. Stegeman	Howard B. Brown

Operations Group

L. D. Hudson, *Group Chairman*
 Membership—Roger K. Ericson
 Constitutions and Bylaws—J. R. Gardner
 Functional Sections—Linas H. Brown
 Budget and Finance—L. D. Hudson
 Chapter Activities—Francis Murray

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The Northwest Suburban Chapter presented Past-President Westberg a plaque with a gavel attached, inscribed with a tribute of his service during the past year. Left to right, Kenneth G. Cook, Membership Chairman; Joseph F. Koenen, Vice-President; William L. Berk, President; Torgny J. Westerberg, Past-President; Carl H. Bowen, Secretary and Norman J. Toberman, Treasurer.



New Officers of Capital Chapter—Left to right: Ronald Knapp, Treasurer; Charles Marr, Secretary; Charles Ritchie, President; and Gerald Margrave, Vice President.

S.P.E. MEMBERS HONORED DURING ENGINEERS' WEEK

John Dolio, Chicago Chapter member of ISPE, elected as the outstanding engineer of the year in the Chicago area, received a plaque from Mayor Daley on Wednesday, February 17. At the same time, Mayor Daley proclaimed February 21 to 27 as Engineers' Week.

Dolio is a consulting engineer with offices at 208 E. La Salle St., and lives at 517 North Park Road, Grange Park. He was cited for his work as a member of the Mayor's Citizens' Committee for Building Code Amendments; for his service as a member of the coroner's jury which investigated the tragic Chicago school fire on Dec. 1, 1958, which caused 95 deaths; and for his activities in behalf of the Illinois Society of Professional Engineers.

On February 25, St. Clair Chapter will name its outstanding engineer of the year in ceremonies the chapter plans during Engineers' Week. Announcement of the awardee has not yet been made.

LADIES OF I.S.P.E. MEMBERS! . . . RESERVE THIS DATE ON YOUR CALENDAR . . . MAY 4, 5, 6!

It is not too soon to begin making plans to accompany your husband to the ISPE Convention to be held in Springfield, Illinois, May 4, 5 and 6, for one of the best vacations you have had in a long while.

CAN YOU TOP THIS?

Registration—an attainment shared by thousands of professional men. Capital Chapter Member Charles G. Macklin has the distinction of being registered in Illinois as a Professional Engineer, Structural Engineer, Architect, and Land Surveyor. And he doesn't limit his practice to Illinois, being also registered in Iowa, Missouri, and Indiana, as well as with the National Bureau of Registration.



1960 Officers for Illinois Association of Highway Engineers, elected at Board of Directors meeting, January 23, in Springfield. Front row, left to right: Aldo D. Reid, Springfield, Secretary; K. A. Johnsen, Chicago, Chairman of the Board; H. W. Monroney, Effingham, Treasurer; back row, left to right: Edward A. Brooks, Springfield, outgoing Secretary; and A. H. Ferger, Effingham, outgoing Chairman.



MADISON CHAPTER OFFICERS FOR 1960

Front Row, L. to R.—Morgan Corlew, President; L. D. Hudson, ISPE Acting President; Edward Juneau, Vice President; Back Row, L. to R.—George Thatcher, on Chapter Board; Vernon F. Weber, on Chapter Board; Byron O'Neal, on Chapter Board; and C. H. Sheppard, Chapter Representative to ISPE Board.

JOSEPH F. KOENEN OPENS OFFICE

Joseph F. Koenen, formerly a Project Engineer with De Leuw, Cather & Company, Consulting Engineers, Chicago, announces the establishment of his office as a Consulting Civil Engineer. Mr. Koenen specializes in water supply, sewerage and drainage projects, offering appraisals, feasibility studies, design and supervision. Offices are located at 529 So. Prindle Ave., Arlington Heights, Ill. In addition to De Leuw, Cather & Co., he has been employed by the Metropolitan Sewerage Commission of Milwaukee, Amann & Whitney, Consulting Engineers, and Soil Testing Services, Inc. Mr. Koenen is presently Consulting Engineer to the Lake County Public Water District.



Joseph F. Koenen

TWO GRADUATE FELLOWSHIPS ARE AWARDED TO I. I. T.

Two graduate fellowships in the field of aircraft and missile propulsion have been awarded to the mechanical engineering department of Illinois Institute of Technology.

The three-year grants, which have a yearly stipend of more than \$2,000 each, were awarded by the U. S. Department of Health, Education, and Welfare.

At present IIT's mechanical engineering department has three graduate students working on doctorates in the fellowship program under the direction of Dr. A. A. Fejer, department chairman.

Current holders are Daniel Joseph, 6050 N. Francisco; Abraham C. Peter, 1635 W. Pratt Blvd.; Zelman Lewkowski, 60 E. 32nd St.

HOW LUCKY CAN YOU GET?

William Sands, P. E., of Decatur (Central Illinois Chapter), took time off during the third week in January to attend the National Convention of the American Roadbuilders in Cincinnati, Ohio. The trip paid double dividends, for Bill won the top prize of a new Chevrolet! Happy riding to our member.

WHERE DO WE GO FROM HERE?

(Continued from Page 5)

more harmonious through change. Now labor and capital can sit down and let the laborer have a voice at the table in the management of productive enterprise. Collective bargaining is a much improved change over the time when a king or ruler simply made a command and everyone had to obey it.

One does not advance if one does not change, but it must be remembered that change can be an amalgamation of bad things as well as good. George Bernard Shaw, the great Irish playwright, never married. A famous English actress took an interest in him and ask him if he did not think it would be fine if they married and had children with her beauty and his brains. He replied that that would be very fine, but then said, "But imagine what would happen if they inherited your brains and my beauty."

The older human society becomes, the more civilized it becomes; and the more educated humanity becomes, the more peace-minded it must become, because it will discover how much more it can gain from peace than war.

People have always tried to live under two different theories. The first is to be individualistic or to do something that will make them stand out from all the rest. The second theory is almost the direct opposite of the first. Under it people try not to be conspicuous or different from others. Henry VIII started the Church of England so that he could have freedom to divorce. Soon the Church of England was strongly against divorce and allowed as little freedom in everything as the Roman Church before, especially during the reign of James I.

The Puritans wanted religious freedom, so they left the Church of England and came to America. When they reached America, they allowed no freedom either.

Everyone wants to be free when someone else is ruler, and when that same person becomes ruler he tends to resist freedom among his subjects. This is a lesson for society, parents, and children, as well as rulers.

So where will we go from here? Each one of us will have to start working from within his own home. If each day we would look back on that day's words and deeds, and ask ourselves if they would pass as Christian words and deeds, and measure up to the Golden Rule, perhaps the next day might show a little better performance.

We, as parents of tomorrow, must hope to fulfill the favorable environmental conditions enabling our children to grow as civilized people capable of bringing peace. We must remember that love is one of Christ's greatest teachings, and that the most effective way to teach our children is by precept and example. Our goal should be a united brotherhood of all mankind under Christianity, or at least Christian principles.

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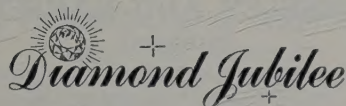
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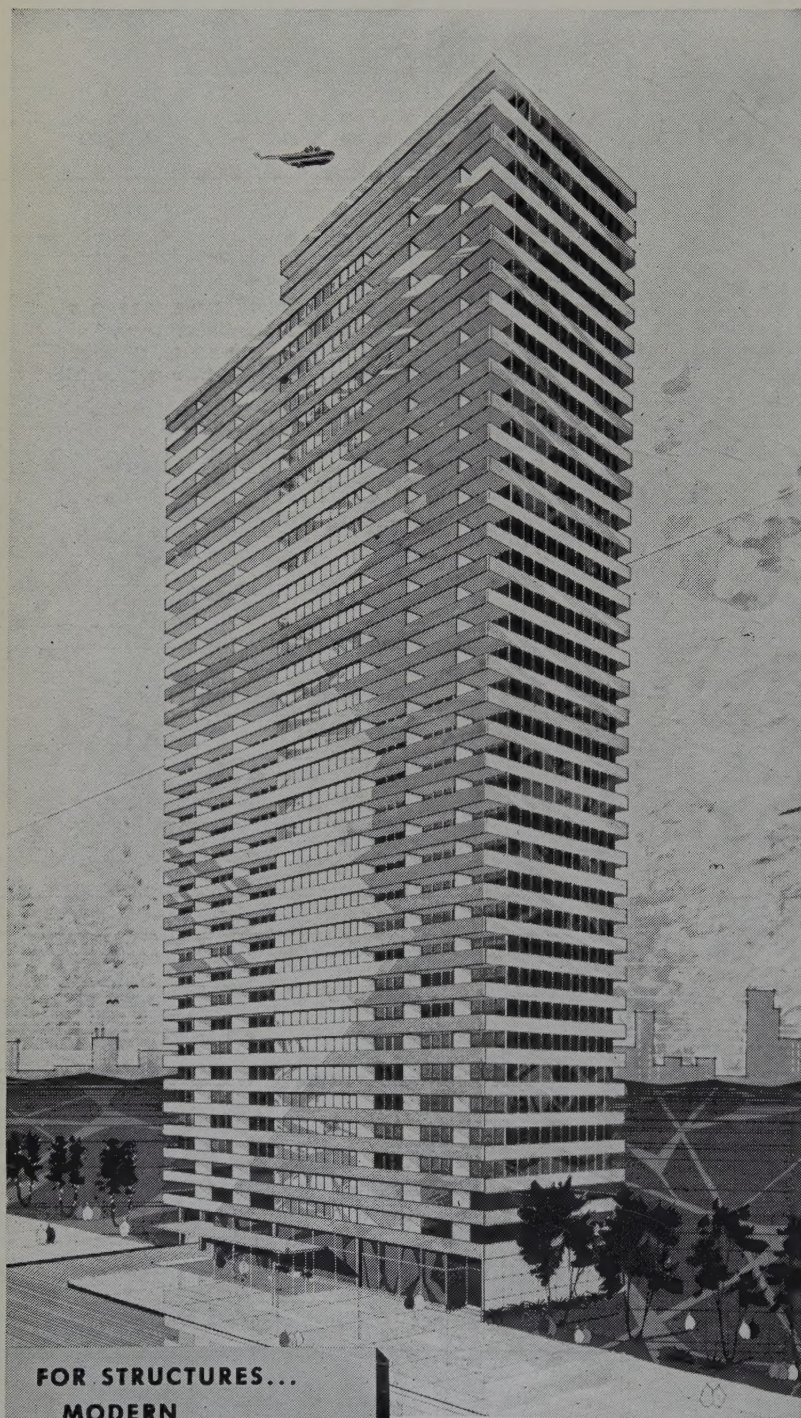
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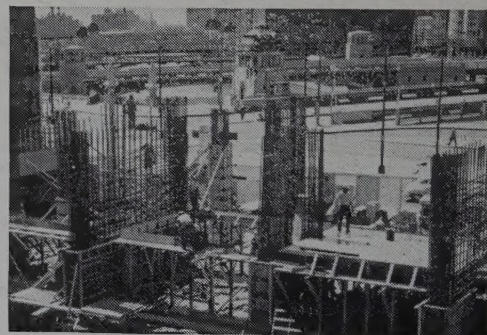
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